

Texas Instruments (Formerly Burr-Brown) Project Area (Part of the TIAA CERCLA Site)

Boundaries:

The Texas Instruments project area is located in Area B of the Tucson International Airport Area (TIAA) site. The property is located at 6730 South Tucson Boulevard - on the northeast side of the Tucson International Airport. It is bounded by Tucson Boulevard on the east, Aragon Road on the south, Plumer Boulevard on the west, and by Valencia Road on the north.

Site History:

- Texas Instruments (formerly Burr-Brown) is a micro-electronics manufacturing facility that has been in operation at this site since 1969.
- Past manufacturing and disposal practices resulted in the release of hazardous wastes into the groundwater.
- The TIAA site was placed on the National Priorities List (NPL) in 1983.
- In 1988, a Record of Decision (ROD) for the regional groundwater at TIAA was issued by EPA. This ROD also covered groundwater contamination in Area B which includes the Texas Instruments project area.
- In March 1990, a Consent Decree (CD) was signed by EPA and the Burr-Brown Corporation (now Texas Instruments) requiring Texas Instruments to clean up the eastern-most part of Area B. The CD also requires Texas Instruments to reimburse EPA for past and future oversight costs.
- In January 1992, a groundwater pump and treat system for Texas Instruments began operation. This system extracts contaminated groundwater and treats it with air stripping before it is used in manufacturing processes.
- Between March 1997 and November 1999, the pump and treat system was discontinued while EPA built a groundwater extraction system at the West-Cap project area.
- Beginning in October 1998, the Texas Instruments groundwater treatment plant began receiving and treating groundwater from EPA's wells at West-Cap.

Site Status:

- This project area is in the operation and maintenance (O&M) phase of cleanup. A groundwater pump and treat system extracts contaminated groundwater and treats it for use in manufacturing processes.
- Since 1992, this system has removed 11.3 pounds of trichloroethene (TCE) from approximately 134 million gallons of groundwater beneath the Texas Instruments project area.

- The Texas Instrument treatment plant has also removed approximately 3.6 pounds of volatile organic compounds (VOCs) from groundwater pumped by the West-Cap extraction wells. These wells have pumped a total of about 89.1 million gallons of water since they went on-line in October 1998.
- EPA has plans to install two additional groundwater extraction wells at the West-Cap project area in 2006. Water from these wells will also be pumped to the Texas Instruments treatment plant and used in manufacturing processes.
- EPA and ADEQ are assessing the possible interaction between the Texas Instruments extraction wells and those at West Cap just to the southwest.
- ADEQ has also recommended that a possible TCE source within the deep vadose zone be evaluated. If that source exists, the pump-and-treat system may need to run indefinitely because TCE could be moving from the vadose zone into the groundwater as fast as it is being removed.

Site Hydrogeology:

- In Area B of the TIAA site, which includes the Texas Instruments project area, the regional aquifer is comprised of two aquifer zones separated by a middle aquitard. The middle aquitard limits the vertical extent of contamination to the upper zone of the regional aquifer which is about 70 to 100 feet thick. The upper zone of the regional aquifer can also be further subdivided into upper and lower subunits.
- The lateral continuity of the upper and lower subunits is difficult to estimate due to heterogeneities resulting from the meandering streams that deposited these sediments. In places, the streams deposited relatively coarse-grained sands and gravels, but in other areas fine-grained overbank and floodplain deposits were left behind.
- Due to the spatially variable erosional and depositional history, in some areas the upper and lower coarse-grained subunit may not exist, and the upper zone of the regional aquifer may be locally composed of almost entirely fine-grained sediments.
- The upper zone of the regional aquifer extends from the water table at a depth of about 85 to 100 feet below ground surface (bgs), to the top of the middle aquitard at a depth of about 175 feet bgs.
- The groundwater flow direction in the upper zone of the regional aquifer is generally toward the north-northwest, but flow within the coarse-grained upper and lower subunits is more toward the northwest.
- More detailed descriptions of the hydrogeology of the Texas Instruments project area can be found in reports and studies available at the TIAA Information Repository.

Contaminants:

The current contaminants of concern in groundwater include VOCs, mainly TCE, with smaller amounts of perchloroethene (PCE). TCE concentrations range from non-detect to about 13 parts per billion (ppb). Contaminants of concern at the site may change as new data become available.

Public Health Impact:

All municipal wells in the area that were contaminated with TCE have been shut down. Most of the domestic wells have either been shut down or converted to irrigation wells. However, a few residents with domestic wells with low levels of TCE and 1,4-dioxane have chosen to continue using their wells.

Community Involvement Activities:

To provide community members with an opportunity to learn about the cleanup process and to obtain local perspective for decisions concerning the cleanup, a Unified Community Advisory Board (UCAB) was formed in 1995. The UCAB meets the third Wednesday of January, April, July, and October. These meetings occur at 6:00 p.m. at the El Pueblo Community Center located at 101 W. Irvington Rd. in Tucson and are open to the public.

Recent EPA fact sheets include: *EPA Proposes Plan to Address Groundwater Contamination at West-Cap and West Plume B Project Areas* (June 2002). In addition, the U.S. Air Force publishes a semi-annual progress report for activities at Air Force Plant 44.

Information Repositories:

Interested parties can review site information at the information repository at the TCE Superfund Information Library located at 101 W. Irvington Road, within the El Pueblo Branch Library in Tucson, (520) 791-4733. Site information is also available at both ADEQ's Southern Regional Office located at 400 W. Congress, Suite 433 in Tucson, and the main office located at 1110 W. Washington Street in Phoenix. Files are available for review Monday through Friday from 8:00 a.m. to 5:00 p.m. Please call (520) 628-6715 to arrange a file review appointment at the Southern Regional Office. To arrange for a time to review the site file at the main ADEQ office, please call the ADEQ Records Center (602) 771-4378 or (800) 234-5677 (Arizona toll-free).

Contacts:

Name	Phone/Fax	E-Mail
Bill Ellett, ADEQ Project Manager	(520) 628-6714*/ (520) 628-6745	ellett.william@azdeq.gov
Matthew Jefferson, EPA Project Manager	(415) 972-3272**/ (415) 947-3528	jefferson.matthew@epa.gov
Vicki Rosen, EPA Community Involvement Coordinator	(415) 972-3244**/ (415) 947-3528	rosen.vicki@epa.gov

*In Arizona, but outside the Tucson area, call toll-free at (888) 271-9302.

**Call EPA's toll-free message line at (800) 231-3075.